CH2M HILL
135 South 84th Street
Suite 325
Milwaukee, WI 53214-1456
Tel 414.272.2426
Fax 414.272.4408

CH2MHILL

March 9, 2004

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Mr. Dion Novak
Remedial Project Manager (SR-6J)
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Subject: WA No. 219-RSBD-B5Y7, Contract No. 68-W6-0025
Eagle Zinc Site, Hillsboro, Illinois
Summary of March 3, 2004 Site Visit

Dear Dion:

Please find enclosed a technical memorandum summarizing our recent visit to the former Eagle Zinc site in Hillsboro, Illinois. Please feel free to call us if you have any questions regarding the enclosed document.

Sincerely,

CH2M HILL

Cherie Wilson

for Chris English, P.E.
Site Manager

STL\Site Visit Cover Letter.doc
c: Stephen Nathan, PO/U.S.EPA, Region 5 (w/o enclosure)
Marshall McReynolds, CO/U.S. EPA, Region 5 (w/o enclosure)
Ike Johnson, PM/CH2M HILL, MKE
Dan Plomb, DPM/CH2M HILL, MKE
Lauri Gorton, QAM/CH2M HILL, MKE
Cathy Barnett/CH2M HILL, STL
Cherie Wilson/CH2M HILL, MKE

Summary of March 3, 2004, Eagle Zinc Company Site Visit

PREPARED FOR: Dion Novak/EPA Region 5

PREPARED BY: Ryan Loveridge/BOS
Chris English/STL

COPIES: John Lowe/ATL
Steve Petron/BOS
Cathy Barnett/STL

DATE: March 9, 2004

On March 3, 2004, representatives of CH2M HILL and ENVIRON conducted a site visit at the former Eagle Zinc Company facility in Hillsboro, Illinois. CH2M HILL participants were Ryan Loveridge, an ecological risk assessor from the Boston, Massachusetts office, and Chris English, the Site Manager from the St. Louis, Missouri office. Representing ENVIRON were Wendy Larson (Limno-Tech, Ann Arbor, Michigan) and Janet Kester from ENVIRON's St. Peters, Missouri office. The objective of the site visit was to observe general ecological conditions at the site and assess evidence of ecological receptors and habitat.

Observed Site Conditions

During the site visit, the temperature was approximately 50°F, and there was intermittent light rain. Prominent site features that were visited are described below.

Retention pond (south of buildings and manufacturing area). The retention pond had open water, presumably from surface water run-off. The water level at the time of the site visit was higher than usual, as evidenced by partially-submerged trees along the shoreline. Shoreline vegetation was not overgrown and may have been maintained during facility operations. Amphibians entered the pond when the shoreline was approached during the site visit. These amphibians were either northern cricket frogs (*Acris crepitan*) or green frogs (*Rana clamitans*), which are common in the area.

Mixed woods habitat (west of buildings and manufacturing area and north of southwest pond). The mixed woods habitat lay along the western boundary of the site and did not appear to have been maintained during previous facility operations. White-tailed deer (*Odocoileus virginianus*) tracks were observed in wet soil areas. A hawk (possibly an immature red-tailed hawk [*Buteo jamaicensis*], which is common in the area) was perched on the facility structures adjacent to the area. Perches were also available in the mixed woods area.

Southwest pond. Raccoon (*Procyon lotor*) tracks and white-tailed deer tracks were observed on the southern shore. The Limno-Tech representative indicated that fish, fathead minnows

and shiner perch have also been observed in the pond. Graded residue piles lined the southern shore. Algal blooms were observed in the pond.

Western drainageway, downstream of southwest pond. Algal blooms were observed at the southwest pond outlet. Water from the southwest pond discharged through an opening in residue piles located along the western shoreline of the pond. Downstream of the southwest pond, the western drainageway flowed through a low-lying floodplain. The area surrounding the western drainageway was a mixed woods habitat that had hydric soils at the time of the site visit.

A drainageway leading from an adjacent cement factory, located south of the site, joined the western drainageway within the site boundaries. Water in this drainageway had a reddish-orange color, most likely of ferrous origin, which continued downstream of the confluence with the western drainageway. Upstream of the confluence, the coloration was most intense where the residue piles on the southern shore of the southwest pond were observed eroding into the drainageway. The reddish-brown color was also observed in the off-site portion of this drainageway, upstream of the erosion area.

Deer scat was observed near the confluence. Cement tailings were noted in the western drainageway within site boundaries. Exposed tree roots adjacent to the drainageway were stained reddish-brown. Littered refuse was common. Benthic invertebrates were not observed.

Western drainageway, upstream of southwest pond. Along this section of the drainageway, the ground surface was saturated with surface water or groundwater, and several seeps were observed. Cattails were common. Accumulated bird feathers were also observed, indicating ground nesting or predation.

Eastern drainageway. The area surrounding the eastern drainageway was a mixed woods habitat that had hydric soils at the time of the site visit. Algal blooms were present in the drainageway. Dead trees (species unidentified) were observed in the area. Discoloration and loss of bark was more pronounced on the southern face of the trees than on the northern face. The prevailing wind direction was not obvious at the time of the site visit. Deer tracks were observed in the area. Benthic invertebrates were not observed in the drainageway.

Old fields (north end and east end of the site). Grasses dominated this habitat and the surface was saturated with surface water or groundwater. The fields were overgrown, but may have been maintained during facility operations.

General Observations. Manufacturing refuse littered the site. Sediment and saturated soils across the site seemed to have an unusual texture, possibly related to a mixture of facility by-products and refuse. A surface moss was also observed in most saturated portions of the site. Caterpillar nests in the trees were common.

Conclusions

The site is ecologically functional. There is sufficient habitat to support herbivorous mammals (white-tailed deer), aquatic mammals (raccoons), and carnivorous birds (red-tailed hawks), and exposure pathways to these receptors are present. Exposure to lower

trophic receptors is also occurring, and there may be exposure-related effects to the terrestrial plant community in the eastern drainageway.